

# Certificate of Analysis

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**Product Name:** (R)-(-)-Rolipram

**Catalog No.:** 1349

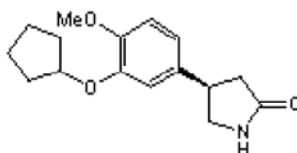
**Batch No.:** 12

**CAS Number:** 85416-75-7

**IUPAC Name:** (4R)-4-[3-(Cyclopentyloxy)-4-methoxyphenyl]pyrrolidin-2-one

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>16</sub>H<sub>21</sub>NO<sub>3</sub>  
**Batch Molecular Weight:** 275.35  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 100 mM  
 DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.5 (Dichloromethane:Methanol [9:1])  
**Melting Point:** Between 135 - 136°C  
**HPLC:** Shows 99.9% purity  
**Chiral HPLC:** Shows 99.2% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	69.79	7.69	5.09
Found	69.78	7.73	5.13

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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## Product Information

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### Description:

More active enantiomer of the PDE4 inhibitor rolipram; 2-10-fold more potent than the S-(+) enantiomer. Racemate and S-enantiomer also available.

### Physical and Chemical Properties:

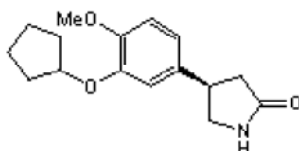
Batch Molecular Formula: C<sub>16</sub>H<sub>21</sub>NO<sub>3</sub>

Batch Molecular Weight: 275.35

Physical Appearance: White solid

**Minimum Purity:** ≥98%

### Batch Molecular Structure:



**Storage:** Store at RT

### Solubility & Usage Info:

ethanol to 100 mM

DMSO to 100 mM

### Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

### References:

**Ohsawa *et al*** (1998) Inhibitory effects of rolipram on partially purified phosphodiesterase 4 from rat brains. *Jpn.J.Pharmacol.* **77** 147. PMID: 9681571.

**Owens *et al*** (1997) Human phosphodiesterase 4A: characterization of full-length and truncated enzymes expressed in COS cells. *Biochem.J.* **326** 53. PMID: 9337850.

**Schneider *et al*** (1986) Stereospecific binding of the antidepressant rolipram to brain protein structures. *Eur.J.Pharmacol.* **127** 105. PMID: 3019721.

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